

# (12) UK Patent Application (19) GB (11) 2 229 099 (13) A

(43) Date of A publication 19.09.1990

(21) Application No 8906285.5

(22) Date of filing 18.03.1989

(71) Applicant  
George Lee Bulbrook  
Orchard Cottage, Bintree Road, Billingford, Dereham,  
Norfolk, NR20 4AJ, United Kingdom

(72) Inventor  
George Lee Bulbrook

(74) Agent and/or Address for Service  
Patrick Stone  
28 Edenside Drive, Attleborough, Norfolk, NR17 2EL,  
United Kingdom

(51) INT CL<sup>5</sup>  
A63F 3/00

(52) UK CL (Edition K)  
A6H H3C1

(56) Documents cited  
US 4696476 A US 4534565 A US 4348027 A  
US 4179127 A US 4099723 A

(58) Field of search  
UK CL (Edition J) A6H H3A H3C1 H3C2 H3C3 H3C4  
H3C5  
INT CL<sup>4</sup> A63F

## (54) Games playing surfaces

(57) A board type playing surface, preferably assembled of balsa wood or plastics slats and squares, the playing squares 10 to 15 of which lie in a plurality of horizontal planes and define a playing surface having the general shape of an arena. The assembly may be glued or tightly fitted from a kit of parts. Alternatively, by use of plastics moulding, the playing surface may be formed integrally.

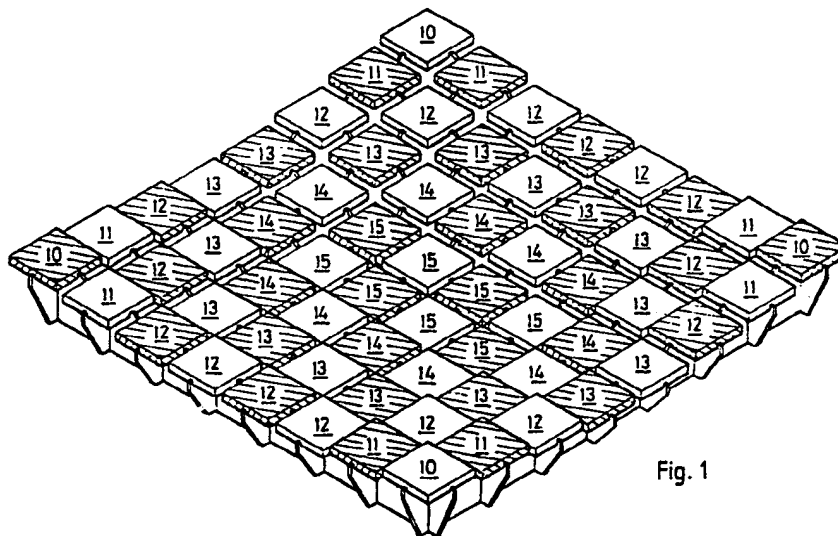


Fig. 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

GB 2 229 099 A

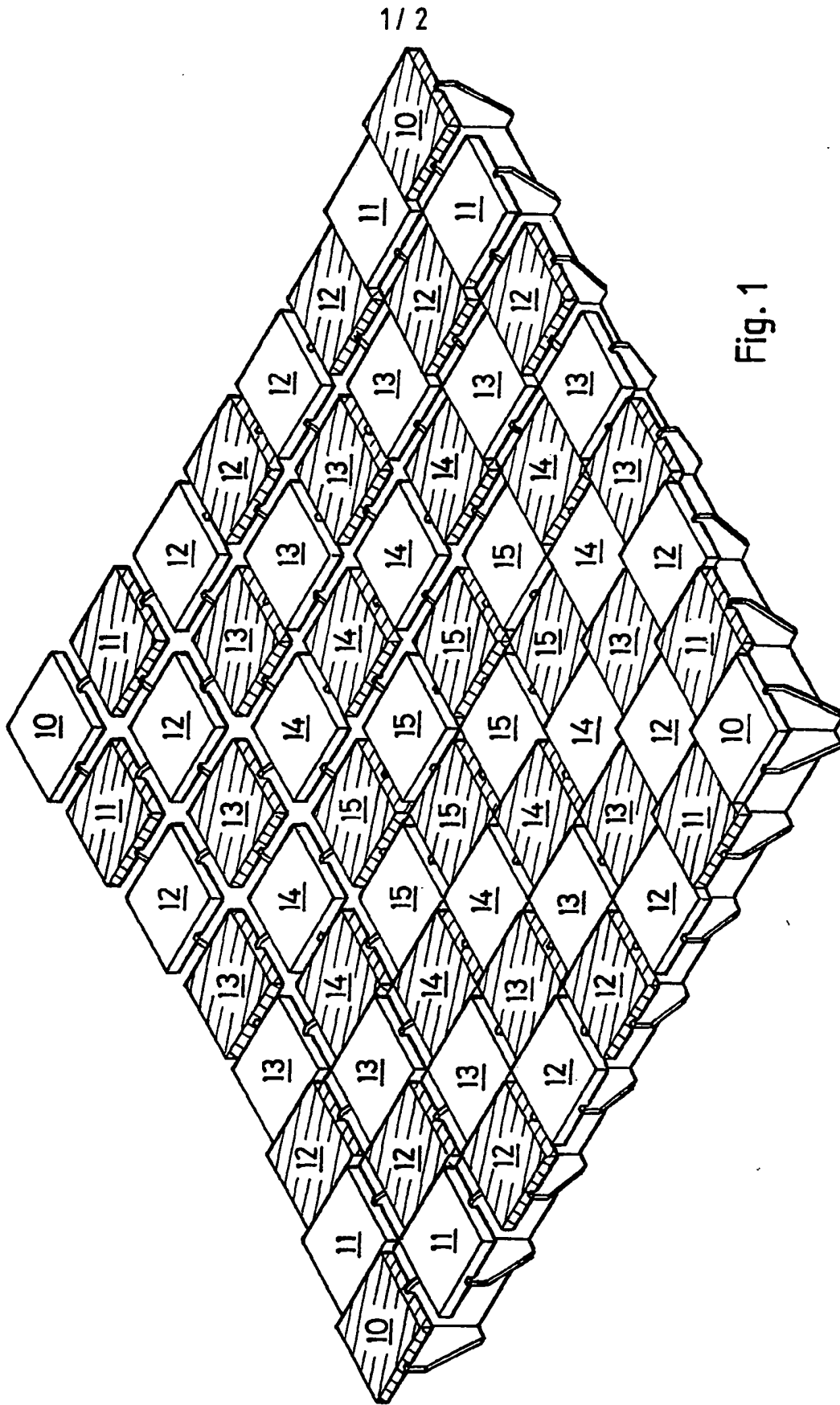


Fig. 1

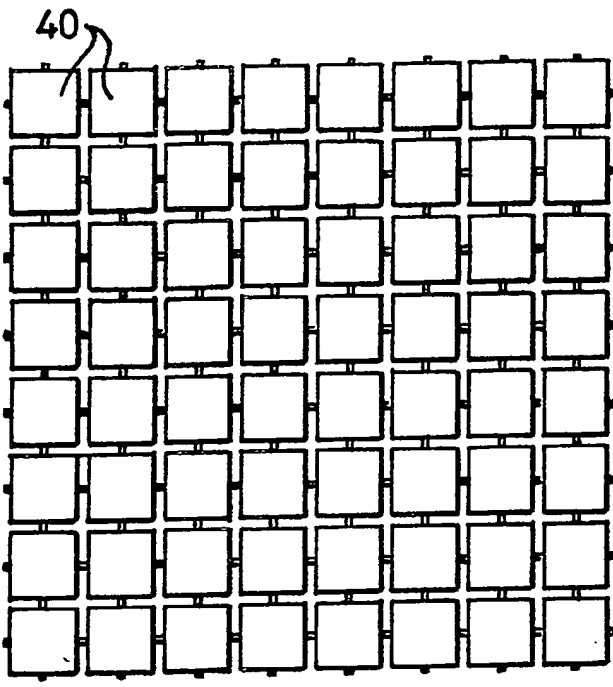


Fig. 2

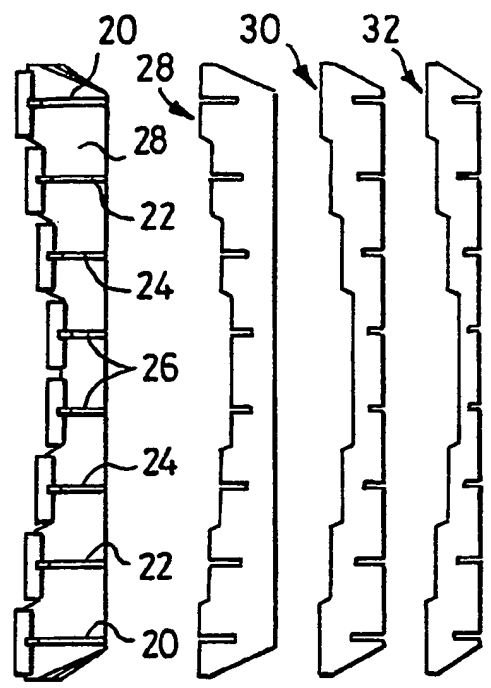


Fig. 2B

Fig. 3E

Fig. 3F

Fig. 3G

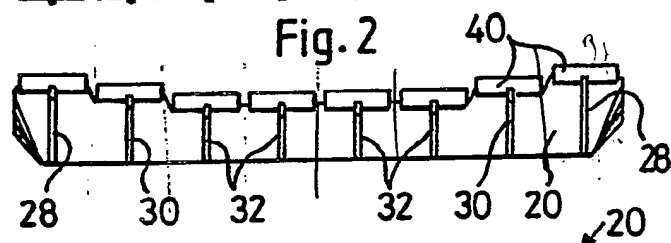


Fig. 2A

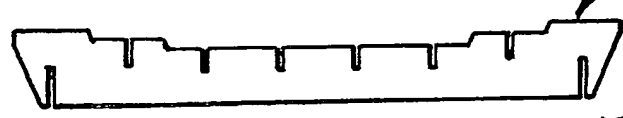


Fig. 3A

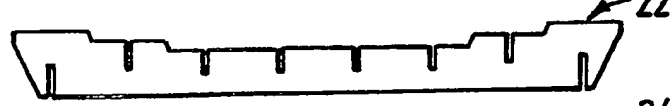


Fig. 3B

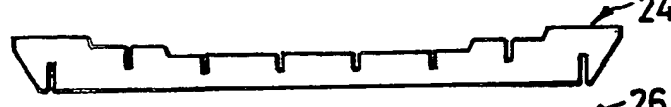


Fig. 3C



Fig. 3D



Fig. 4



Fig. 4A

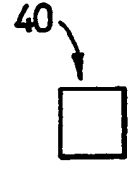


Fig. 4B

Improvements in Games Playing Surfaces

This invention relates to a surface for the playing of games, in particular games such as chess, draughts and the like conventionally played on a board having a pattern of differently coloured squares, typically in the alternating  
5 sequence, commonly known as a chequer board pattern. Such a board is referred to herein as a squared board. The board typically although not essentially has sixty four playing squares.

10 According to the invention, there is provided a squared board type playing surface wherein the playing squares lie in a plurality of parallel horizontal planes.

It will thus be appreciated that the present invention  
15 provides a device which is not a board in the conventional meaning thereof and, although referred to as a surface, even this surface is not continuous.

In a preferred device, the centres of the playing squares  
20 lie very approximately on the surface of a three dimensionally curved solid.

Thus, in one arrangement, the playing squares are distributed on at least three, four or five and preferably six parallel  
25 planes, the four corner squares being coplanar in the lowest or more preferably the highest plane and the centre squares being coplanar in the highest or more preferably the lowest plane. Thus, in the preferred arrangement having the corner squares at the highest level, the device defines a  
30 playing surface generally resembling an arena. Seen from any side, the edge of the board approximately conforms to a shallow curve. However, whilst the curve on any one pair

of two opposite sides will most desirably be the same, the curve on the other pair of two opposite sides may be different.

5 Thus, a most preferred arrangement has four corner squares in the highest plane, eight corner-adjacent edge squares in the second highest plane, and eight next adjacent edge squares together with two central edge squares on one pair of two opposite sides and four corner adjacent squares in  
10 the diagonal direction in the third highest plane, there being a two-by-four arrangement of eight central squares on the lowest plane surrounded by twelve row/column adjacent squares in the next lowest plane and four diagonally adjacent squares on the fourth highest plane, the remaining  
15 squares, including the two central edge squares on the other pair of two opposite sides also being on the fourth highest plane.

The device in accordance with the invention may be constructed out of various materials and in various ways.  
20 For example, an inexpensive integral version in moulded plastics material is conceivable, as also is a construction assembled from solid unit blocks. Preferably, however, the device is assembled from slats and squares of plastics  
25 material or more preferably balsa wood or thin plywood, the slats being slotted and interengaged at the slots to form a lattice assembly which constitutes a base to which the squares are attached on top. In this arrangement, adjacent squares are preferably slightly spaced in the horizontal  
30 direction, apart from any vertical spacing which may exist between adjacent squares. The upper edges of the slats are profiled to provide the required three dimensional placements of the squares, which are preferably grooved on the underside to fit to the upper edges of the slats each

at a junction where two slats intersect at right angles.  
Thus, a base assembly of a set of eight slats in one  
direction and a set of eight slats in the perpendicular  
direction is required, some of the slats having slots at  
5 their upper edges and some of the slats having slots at  
their lower edges.

For the preferred arrangement, one such set of slats will  
comprise four pairs of slats, the slats of each pair  
10 differing from the slats of all the other pairs, while the  
other set of slats will include a sub-set of four similar  
slats and two pairs.

The slats and squares may be glued together as a permanent  
15 assembly, or may be formed for repeated assembly and dis-  
assembly in the manner of a constructional toy.

It will thus be appreciated that the invention also extends  
to a kit of parts comprising sets of slotted slats and  
20 grooved squares which can be assembled to form the playing  
surface hereinbefore defined.

An embodiment of device in accordance with the invention is  
shown by way of example in the accompanying drawings, in  
25 which:-

Figure 1 is a perspective view of the device;

Figure 2 is a plan view thereof, with associated side  
30 elevational views in Figures 2A and 2B and  
elevational views of the slats used to form the  
base assembly in Figures 3A to 3D and Figures  
3E to 3G; and

Figures 4, 4A and 4B are underplan, side elevational and top plan views of a playing square.

Referring to the drawings, a three dimensional playing surface of the chequer board type has sixty four squares with alternating squares of differential colouring. The playing squares are arranged in six parallel horizontal planes, so that some squares differ in height from the others.

10

In Figure 1 of the drawings, squares in the highest plane are marked with reference 10, squares in the next highest plane with reference 11, and so on down to squares in the lowest plane marked with reference 15. The playing surface thus approximately conforms to a concave solid surface, resembling the shape of an arena. From Figure 2 it can be seen that in plan the playing surface is similar to that of a conventional board, although the playing squares, generally referenced 40, are laterally spaced.

20

The device is assembled from two sets of eight slotted slats and sixty four individual playing squares 40. The slotted slats are interengaged to form a lattice type base assembly on which the squares are located, each at a junction between two slats.

25

The slats required are shown in Figures 3A to 3G, consisting of two sets respectively for extending in perpendicular directions to form the required lattice. The first set, with end slots in their lower edges and intermediate slots in the upper edges, has two slats 20, two slats 22, two slats 24 and two slats 26; the other set has two slats 28 with slots in the upper edges, and two slats 30 and four slats 32, all with slots in the lower edges. The manner

30

in which these slats are assembled will be clear from Figures 2A and 2B, it being understood that the upper edge slots in slats 28 engage with the lower edge end slots of slats 20, 22, 24 and 26.

5

From Figure 3A, it can be seen that a playing square, generally referenced 40, has a grooved cross 42 on its underside to enable it to be fitted on top of the lattice type base at the junction between two slats.

10

The slats and squares may be made of plastics material, but are preferably made of balsa wood or thin plywood. These parts may be glued together on assembly, but preferably the parts interengage in tight fitting manner without additional fixing, so that they can readily be dis-assembled and re-assembled, as required for use and/or storage. The device may thus be supplied as a kit of parts.

20 It will be appreciated that various modifications of the above-described and illustrated arrangement are possible within the scope of the invention. Thus, apart from relatively minor changes in the number of planes utilised and the organisation of the playing squares in these planes, 25 it is possible, as by plastics moulding, to form the playing surface as an integral device.



Claims

1. A squared board type playing surface wherein the playing squares lie in a plurality of parallel horizontal planes.
- 5 2. A playing surface according to claim 1, wherein the centres of the playing squares lie very approximately on the surface of a three dimensionally curved solid.
3. A playing surface according to claim 1 or claim 2,  
10 wherein the playing squares are distributed on at least three parallel planes.
4. A playing surface according to claim 3, wherein the playing squares are distributed on six parallel planes.  
15
5. A playing surface according to claim 4, the four corner squares being coplanar in the lowest or more preferably the highest plane and the centre squares being coplanar in the highest or more preferably the lowest plane.  
20
6. A playing surface according to claim 5, wherein the device defines a playing surface generally resembling an arena.
- 25 7. A playing surface according to claim 6, wherein, seen from any side, the edge of the board approximately conforms to a shallow curve.
8. A playing surface according to claim 7, wherein the  
30 curve on any one pair of opposite sides is the same and the curve on the opposite pair of sides is different.

9. A playing surface according to claim 8, having four corner squares in the highest plane, eight corner-adjacent edge squares in the second highest plane, and eight next adjacent edge squares together with two central edge squares  
5 on one pair of two opposite sides and four corner adjacent squares in the diagonal direction in the third highest plane, there being a two-by-four arrangement of eight central squares on the lowest plane surrounded by twelve row/column adjacent squares in the next lowest plane and four diagonally  
10 adjacent squares on the fourth highest plane, the remaining squares, including the two central edge squares on the other pair of two opposite sides also being on the fourth highest plane.

15 10. A playing surface according to any of claims 1 to 9, assembled from slats and squares of plastics material or balsa wood or thin plywood, the slats being slotted and interengaged at the slots to form a lattice assembly which constitutes a base to which the squares are attached on top.

20

11. A playing surface according to claim 10, wherein adjacent squares are slightly spaced in the horizontal direction, apart from any vertical spacing which may exist between adjacent squares.

25

12. A playing surface according to claim 10 or claim 11, wherein the upper edges of the slats are profiled to provide the required three dimensional placements of the squares.

30 13. A playing surface according to any of claims 10 to 12, wherein the squares are grooved on the underside to fit to the upper edges of the slats each at a junction where two slats intersect at right angles.

14. A playing surface according to claim 13, having a set of eight slats in one direction and a set of eight slats in the perpendicular direction, some of the slats having slots at their upper edges and some of the slats having slots at  
5 their lower edges.

15. A playing surface according to any of claims 10 to 14, wherein the slats and squares are glued together as a permanent assembly.

10

16. A kit of part for forming a playing surface according to any of claims 10 to 14.

17. A board-type playing surface substantially as herein-  
15 before described with reference to the accompanying drawings.

Amendments to the claims have been filed as follows

1. A squared board type playing surface wherein the playing squares lie in a plurality of parallel horizontal planes, the centres of the playing squares lying very approximately on the surface of a three dimensionally curved  
5 solid such that the playing surface generally resembles an arena, wherein, seen from any side, the edge of the board approximately conforms to a shallow curve, the curve on any one pair of opposite sides being the same and the curve on the opposite pair of sides being different.
- 10 2. A playing surface according to claim 1, wherein the playing squares are distributed on at least three parallel planes.
- 15 3. A playing surface according to claim 2, wherein the playing squares are distributed on six parallel planes.
4. A playing surface according to claim 3, the four corner squares being coplanar in the highest plane and the centre  
20 squares being coplanar in the lowest plane.